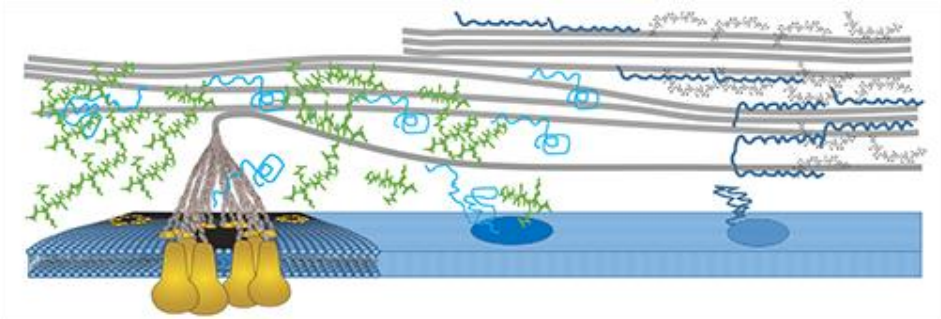
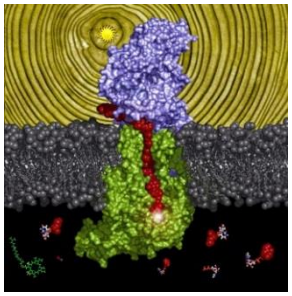
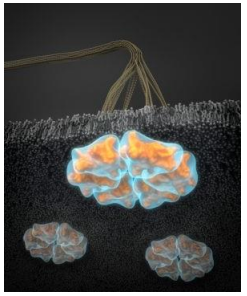
Center for Lignocellulose Structure and Formation (CLSF)
Daniel J. Cosgrove (Penn State University)

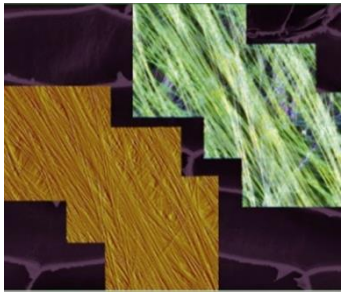
Mission: to develop a nano- to meso-scale understanding of plant cell walls, the main structural material in plants, and the mechanisms of their assembly, forming the foundation for significant advances in sustainable energy and novel biomaterials.

www.lignocellulose.org









RESEARCH PLAN

With a unique mix of molecular biologists, chemists, physicists, engineers and computational modelers, CLSF is developing a molecular understanding of the nano-machinery that transforms simple sugars into cellulose microfibrils and the 'rules of assembly' that enable scaffolds of cellulose microfibrils to interact with water, matrix polysaccharides, and lignin to produce hierarchically-ordered cell walls with diverse physical and material properties.

U.S. DEPARTMENT OF ENERGY | Office of Science | CLSF | OAK RIDGE National Laboratory | UNIVERSITY OF Rhode Island | THE UNIVERSITY OF TEXAS AT EL PASO | MIT | NC STATE UNIVERSITY | PENNSTATE | UNIVERSITY of VIRGINIA